

In re Application of:

JAI N. SUBRAHMANYAM et al.

Application No.: 10/769,143

Filed: January 30, 2004

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Docket No.: K35A1290

REMARKS

In the pending Office Action, claims 1 - 10 were rejected under § 103(a) as allegedly unpatentable over U.S. Patent No. 6,115,198 to Reed et al. in view of U.S. Patent No. 6,487,032 to Cloke et al.

Applicants respectfully traverse each of the rejections and respectfully request reconsideration of this application in light of the following remarks.

The rejection of independent claim 1 as allegedly unpatentable over the Reed patent in view of the Cloke patent is respectfully traversed. Claim 1 recites a disk drive including rotating magnetic media having tracks identified by binary codewords. Each track codeword for a particular track within a contiguous band of tracks differs from a track codeword for an adjacent track within the contiguous band of tracks by a defined number N of bits, and differs from a track codeword for a nonadjacent track within the contiguous band of tracks by at least the defined number N of bits. The defined number N of bits is greater than four such that at least two bit errors can be corrected when reading a track codeword.

The Reed patent discloses a (7,4) Hamming code capable of correcting a single bit error in a detected servo track address codeword for correction to one of the adjacent track address codewords. See column 7, lines 1-50. The Examiner acknowledges that the Reed patent "fails to clearly define that the number N of bits is greater than 4 as claimed." See Office Action, page 2. The Examiner then asserts that the Cloke patent discloses "that when hamming distance is greater than 4 at least two bit error can be corrected (see col. 36, line 22-49)." See Office Action, page 3.

However, the examiner does not assert that the combination of the Reed and Cloke patents discloses the actual track codewords having the features recited in claim 1. Indeed, the Examiner merely asserts that the Reed and Cloke patents suggest that a track codeword may include a hamming distance of greater than 4, without asserting that these patents disclose the features of the track codewords described in claim 1. For example, each track codeword recited

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in claim 1 allows correction of at least two bit errors AND has particular bit differences with track codewords for adjacent and nonadjacent tracks. Neither the Reed nor Cloke patents teach or suggest (individually or in combination) these limitations.

Further, the combination of the Reed and Cloke patents would not enable one of skill in the art to create the disk drive and the codewords claimed in claim 1. Merely combining two references that suggest certain desired properties for track codewords fails to render obvious a disk drive comprising track codewords having these (and other) properties because the two references (separately or in combination) do not comprise an enabling disclosure. *See M.P.E.P. § 2144.08(II)(B) (p. 2100-159), and In re Hoeksema*, 399 F.2d 269, 274 (CCPA 1968).

In the Office Action, the Examiner asserts that it would have been obvious “to modify the disk drive disclosed by Reed et al with above teaching from Cloke et al in order to provide track codeword of a particular track differ from the codeword of the adjacent track by 4 or more bits such that two bit errors can be corrected and hence to increase reliability.” See page 3. Applicants disagree with the Examiner and assert that the Cloke and Reed patents fail to enable one of ordinary skill in the art to provide the claimed track codewords.

Also, the Cloke patent teaches from the combination, as it favors redundancy for correcting track codeword reading errors. More particularly, the Cloke patent teaches that the “optional redundant TRK ID 79, when present, improves track detection reliability and reduces the probability that track ID errors will occurs during track-seeking operations . . .” See column 15, lines 37-40. Thus, the Cloke and Reed patents, taken singly or in combination, cannot render obvious the disk drive of claim 1. Accordingly, claim 1 should now be allowed.

The rejections of claims 2-5, which depend on independent claim 1, as allegedly unpatentable over the Reed patent in view of the Cloke patent are respectfully traversed. Claim 2 recites that the defined number of bits N is 7, which feature is not disclosed in the Reed patent or in the Cloke patent. Similarly, claim 3 recites that the defined number of bits N is 5. Accordingly, for these reasons and the reasons recited with respect to independent claim 1,

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dependent claims 2-5 define patentable advances over the Reed and Cloke patents, and the rejections of claim 2-5, under 35 U.S.C. § 103(a), should now be withdrawn.

Claim 6 (amended to correct a typographical error) recites a method for identifying tracks on a rotating magnetic media of a disk drive, comprising assigning each track within a contiguous band of tracks with a unique binary codeword such that each track codeword for a particular track within the contiguous band of tracks differs from a track codeword for an adjacent track within the contiguous band of tracks by a defined number N of bits, and differs from a track codeword for a nonadjacent track within the contiguous band of tracks by at least the defined number N of bits, wherein the defined number N of bits is greater than four such that at least two bit errors can be corrected when reading a track codeword. For reasons similar to those discussed above with respect to claim 1, Applicants respectfully submit that the rejection over the Reed and Cloke patents should be withdrawn. In particular, the combination of the Reed and Cloke patents do not teach or suggest the claimed method and would not enable one skilled in the art to practice the claimed method, and therefore the combination cannot render Claim 6 obvious. *See M.P.E.P. § 2144.08(II)(B)* (p. 2100-159), and *In re Hoeksema*, 399 F.2d 269, 274 (CCPA 1968).

The rejections of claims 7-10, which depend on independent claim 6, as allegedly unpatentable over the Reed patent in view of the Cloke patent are respectfully traversed. Claim 7 recites that the defined number of bits N is 7, which feature is not disclosed in the Reed patent or in the Cloke patent. Similarly, claim 8 recites that the defined number of bits N is 5. Accordingly, for these reasons and the reasons recited with respect to independent claim 6, dependent claims 7-10 define patentable advances over the Reed and Cloke patents, and the rejections of claim 7-10, under 35 U.S.C. § 103(a), should now be withdrawn.

New claims 11 and 12 are supported in the specification by, for example, paragraph number [0029] and the codeword list shown in Figures 3A-3D.

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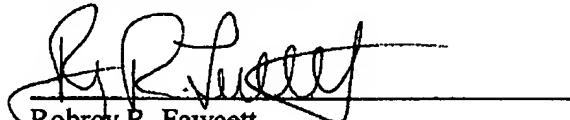
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CONCLUSION

In view of the above amendments and remarks, this application should now be in condition for allowance. If any questions or issues remain, the Examiner is invited to contact the undersigned at the telephone number set forth below so that prosecution of this application can proceed in an expeditious fashion.

Respectfully submitted,



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